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LISTS OF SPECIES

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Birds of the Man and Biosphere Reserve of Luki, Bas-Congo province, Democratic Republic of Congo

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Abstract: The Democratic Republic of Congo holds the most diverse assemblage of birds in Africa. However, ornithological surveys in its network of reserves are rare. In this paper we present the first detailed list of birds from the Man and Biosphere Reserve of Luki in the country's southwestern tip based on collected specimens, photographs, audio recordings, and direct observations from two surveys conducted in 2012–2013. We document a total of 136 species, including the threatened *Psittacus erithacus*. Range extensions of four species and breeding records for 19 species are also reported. Further surveys in the reserve, which covers the largest remaining forest patch along the Lower Congo River, are highly recommended.

Key words: avifauna; Africa; species inventory

INTRODUCTION

The Democratic Republic of Congo (DRC), the largest country in Sub-Saharan Africa, holds a highly diverse avian fauna owing to its vast land area and variety of habitats present. A total of ~1100 bird species is known to occur in the country distributed among the moist lowland evergreen forests, semi-evergreen forests, and swamp-forests of the Congo Basin in the northern half of the country; savannas north and south of the these Congo Basin forests; grasslands and montane forests of the Albertine Rift highlands in the country's eastern region; and dry forests and miombo woodland on the Katanga plateau in the southeast (Demey and Louette 2001). A network of 29 protected areas consisting of 7 parks and 22 reserves has been established in the country but detailed ornithological work in these protected areas is largely absent (Inogwabini et al. 2005). Efforts have been made to describe the ecology of some species (Kisasa and Aloni 2011; Kisasa 2012a, 2012b) but more comprehensive monitoring and research programs are required to guide management strategies in these protected areas (Struhsaker et al. 2005).

The Man and Biosphere (MAB) Reserve of Luki (hereafter, Luki), established in 1979, encompasses 327 km² of lowland forest that forms part of the Mayombe forest patch near the DRC's Atlantic coast (Figure 1). Situated in the Luki River basin, the reserve has a rolling topography ranging between 100–500 m above sea level and consists of a variety of habitats, including mature and young secondary forest, gallery forest, wooded savanna, secondary bush, and cultivated area (Figure 2). The reserve receives an annual rainfall of 1,155–1,818 mm, mostly during the months of October to April (Pendje and Baya 1992; Mutambue 1996; Demey and Louette 2001). Detailed information on the birds of Luki is lacking, because no ornithological survey has been conducted in the area. Demey and Louette (2001) created a provisionary list of 136 biome-restricted species known from the Mayombe forest that they expected to be present at Luki. Based on this list, the Luki Forest Reserve Important Bird Area meets Birdlife International's A3 criteria for biome-restricted species, which states that, "the site is known or thought to hold a significant component of the group of species whose distributions are largely or wholly confined to one biome" (Birdlife International 2015). In this paper we

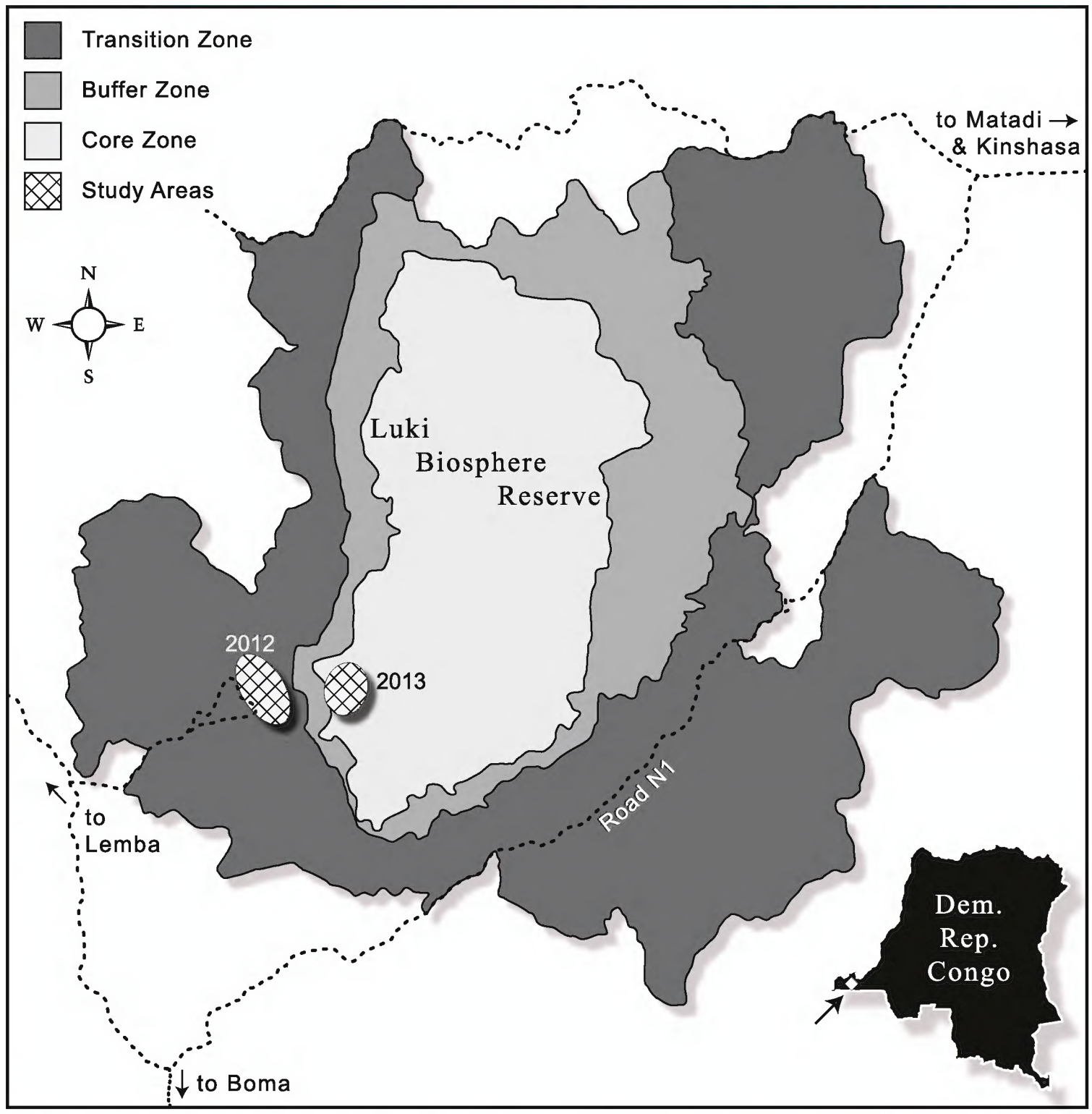

Figure 1. Map of the Man and Biosphere Reserve of Luki showing survey sites and its location in the Democratic Republic of Congo.

document the first detailed field survey of birds from the MAB Reserve of Luki based on collected specimens, photographs, audio recordings, and direct observations.

MATERIALS AND METHODS

We assembled a detailed list of birds at the MAB Reserve of Luki based on a collection of specimens, audio recordings, and direct observations made from 23–30 June 2012, and from 12–16 July 2013. We were based at the office and residence of the World Wide Fund for Nature at Luki (05.62150° S, 013.09819° E, 300 m above sea level). We consulted Sinclair and Ryan (2010) and Borrow and Demey (2001) for species identification and the *Birds of Africa* series (Fry et al. 1982–2004) for status and distribution information. In this paper, we follow the taxonomy of Clements et al. (2012).

To collect specimens we used 34 12 m × 2.5 m mist nets that we installed in primary forest, forest edge, grassland, and garden habitat in 11 different locations in the reserve's core and buffer zones (Table 1; Figure 1). We carried out 164.5 net-days of netting effort (nets were open from approximately 06:00–17:00 h during the day). We visited nets 3–5 times each day, with nets in open areas receiving more frequent visits. The weather was seasonably cool and dry during the study period with the exception of one period of light drizzle on 28 June 2012. We prepared 177 specimens of 50 species as dried study skins or preserved whole in 10% formaldehyde. We collected ~0.05 g of pectoral muscle tissue from

Table 1. Geographical coordinates of netting locations at the Man and Biosphere Reserve of Luki.

Latitude	Longitude	Elevation (m)	Habitat
05.61894° S	013.10941° E	165	Coffee plantation adjacent to forest
05.62177° S	013.12269° E	166	Stream
05.62152° S	013.10866° E	166	Forest adjacent to stream
05.62147° S	013.10855° E	167	Forest adjacent to stream
05.62105° S	013.10755° E	193	Primary forest
05.62091° S	013.10747° E	188	Primary forest
05.62122° S	013.10727° E	184	Primary forest
05.62225° S	013.10069° E	287	Primary forest
05.62186° S	013.10044° E	287	Primary forest
05.62131° S	013.09977° E	298	Primary forest
05.62150° S	013.09819° E	299	Open residential area (INERA)
05.61590° S	013.12685° E	268*	Primary forest

* Locality of the 2013 survey. All other localities are from the 2012 survey.

each specimen for molecular studies. We noted detailed information on each specimen, including collecting date and locality information, weight, sex, type and measurement of gonads, coloration of soft parts (iris, bill, mouth lining, tarsus, and feet), skull ossification, presence and measurement of bursa of Fabricius, stomach and crop contents, molt condition, and fat condition. Ancillary data from the 2013 surveys also included ectoparasites (e.g., lice, fleas, ticks) living on bird hosts. Specimens were collected under Scientific Collecting Permit Nos. 006/SG/ECN/DCN/2012 and 01/DCN/SG/ECN/2013 for the 2012 and 2013 surveys, respectively, and exported to the United States through Export Permit Nos. 019/SG/ECN/DCN/2012 and 003/SG/ECN/DCN/13 and CITES Permit Nos. 4468 and 5394, issued by the Ministry of Environment, Nature Conservation, and Tourism in Kinshasa. All specimens from the 2012 survey are deposited in the ornithology collection of the University of Kansas Biodiversity Institute, Lawrence, Kansas, U.S.A. (accession nos. 120773–120774, 120781–120803, 120868–120881, 120900–120902, 120923–120934, 120939, 120941–120942, 120945–120953, 120991–121050), and specimens from the 2013 survey are deposited at the Field Museum of Natural History, Chicago, Ilinois, USA.

MJA conducted daily bird observations for a total of 31.75 hours during the 2012 survey work. All observations are freely available on-line through eBird (http://ebird.org). MJA recorded bird vocalizations from 27 species using a Nagra ARES-BB+ with a Sennheiser ME62 omnidirectional microphone mounted in a Telinga Universal parabolic reflector. All recordings are archived in the Macaulay Library at the Cornell Laboratory of Ornithology, Ithaca, New York, U.S.A and are available on-line at (http://macaulaylibrary.org).

RESULTS AND DISCUSSION

We recorded 136 species belonging to 96 genera, distributed among 37 families and eight orders (Table 2; Figures 3–8). Most species recorded were expected to occur in Luki (Demey and Louette 2001). As expected for the month of June, we did not encounter any boreal migrants. Knowledge about intra-African bird migration in the area is poor so we avoid speculating whether our records include intra-African migrants.

We obtained new southernmost records for four species based on known distribution information from the *Birds of Africa,* Volumes 1–7 (Fry et al. 1982–2004) and Pedersen (2010). These range extensions include sightings of the following species: *Aquila africana* (Cassin, 1865); *Columba iriditorques* Cassin, 1856; *Platysteira tonsa* (Bates, 1911); and *Malimbus erythrogaster* Reichenow, 1893. *Aquila africana* and *C. iriditorques* were presumed to occur at Luki (Demey and Louette 2001), but no records existed prior to our work. *Aquila africana* is widespread and *C. iriditorques* is known from Gabon and the Congo Basin, but not from Bas-Congo province; thus, their presence at Luki is unsurprising. *Platysteira tonsa* and *M. erythrogaster* have not previously been recorded south of Gabon or northeastern DRC, and they were not previously suspected to occur at Luki (Demey and Louette 2001).

Evidence of breeding, observed in a total of 23 species, is summarized in Table 2. We observed juvenile birds of 19 species, indicating that late June marks the tail end of at least one breeding season at Luki. This timeframe coincides with the end of the October–April rainy season (Demey and Louette 2001), during which we suspect much breeding occurs. We noted this both with net-captured juvenile birds (age identified by plumage or the presence of bursa of Fabricius) and through observation of family groups in the forest. However, we also noted enlarged gonads in two species [*Pogoniulis subsulphureus* (Fraser, 1843) and *Campethera caroli* (Malherbe, 1852)], birds performing mating displays (*Smithornis rufolateralis* G.R. Gray, 1864), and an active breeding colony of *Gymnobucco calvus* (Lafresnaye, 1841), indicating that some species breed in the area in June.

Of the 136 species identified in our survey, only *Psittacus erithacus* Linnaeus, 1758, which occurs in the forests of Central Africa, is considered globally threatened due to heavy trapping for the pet trade ("Vulnerable," Birdlife International 2013). *Cossypha heinrichi* A. Smith, 1840 ("Vulnerable") is the only other threatened species that may be present (Fry et al. 1997), but we did not detect it. Three raptor species, *Polemaetus bellicosus* (Daudin, 1800; "Vulnerable"), *Terathopius ecaudatus* (Daudin, 1800; "Near-threatened"), and *Stephanoaetus coronatus* (Linnaeus, 1766; "Near-threatened"), and the flycatcher *Muscicapa tessmanni* (Reichenow, 1907; "Data deficient"), were not recorded, but they may also be present at Luki (Brown 1982; Erard et al. 2002). On a local scale, Luki's avifauna is threatened by deforestation and trapping, issues that need to be addressed by all concerned stakeholders.

This work represents a preliminary list of the avifauna of the Luki reserve. Coincidentally, our full list of 136 species is precisely the number of biome-restricted species predicted to occur at Luki by Demey and Louette (2001). However, we believe that our study likely overlooked some resident species because we covered only a small area of the reserve and our survey's duration was brief. Further surveys are recommended throughout the reserve, especially focused in the interior of the larger core Zone A (Figure 1). We advise additional surveys should be done at various times of year to maximize observations of boreal and intra-African migrant species, as well as to further document seasonal life history strategies of birds such as breeding, molt, and migration. Although incomplete, this list serves as a baseline with which to compare future bird surveys in the reserve.

Table 2. List of species recorded from the Man and Biosphere Reserve of Luki with notes indicating relative abundance, evidence of breeding, and other noteworthy natural history observations. Relative abundance criteria are as follows: common, observed numerous instances daily (usually >3 individuals); fairly common, observed almost daily; uncommon, observed regularly, but only once every 2–3 days. Birds seen fewer than once every 2–3 days were deemed rare or difficult to detect and are noted as the total number of birds seen during the survey. * Indicates species for which voucher specimens were collected. † Indicates species for which audio recordings were made. § Indicates species for which evidence of breeding was observed either through mating displays or the presence of juveniles or enlarged gonads.

Taxa	English Name	Notes
Order ACCIPITRIFORMES		
Family Accipitridae		
Gypohierax angolensis (Gmelin, 1788)	Palm-nut Vulture	Fairly common. Seen most days in small flocks leaving their morning roosts. Flock size ranged from 1–9 individuals.
Aquila africana (Cassin, 1865)	Cassin's Hawk-Eagle	Two birds were observed once soaring over camp; one adult, one juvenile. The birds were very vocal during the ten-minute observation.
*Accipiter toussenelii** (J. Verreaux, E. Verreaux E & Des Murs, 1855)	Red-chested Goshawk	One individual taken in secondary forest.
*Accipiter castanilius**§ Bonaparte, 1853	Chestnut-flanked Sparrowhawk	One individual taken in secondary, mayombe-like forest. Bursa present.
Accipiter melanoleucus A. Smith, 1830	Black Goshawk	One individual seen in primary forest.
Urotriorchis macrourus† (Hartlaub, 1855)	Long-tailed Hawk	One immature seen and heard twice in secondary, mayombe-like forest.
Buteo auguralis Salvadori, 1865	Red-necked Buzzard	One immature seen three times in clearing at camp. Observed foraging among buildings and forest edge.
Order COLUMBIFORMES		
Family Columbidae		
Columba iriditorques† Cassin, 1856	Bronze-naped Pigeon	Fairly common and vocal throughout forest.
Streptopelia semitorquata (Rüppell, 1837)	Red-eyed Dove	Common. Seen daily in clearings at camp.
*Turtur afer** (Linnaeus, 1766)	Blue-spotted Wood-Dove	Common. Seen daily in forest edge.
*Turtur brehmeri** (Hartlaub, 1865)	Blue-headed Wood-Dove	Uncommon. Seen infrequently in primary forest.
Treron calvus† (Temminck, 1811)	African Green-Pigeon	Fairly common. Seen/heard daily from forest canopy throughout.
Order CUCULIFORMES		
Family Musophagidae		
Corythaeola cristata† (Vieillot, 1816)	Great Blue Turaco	Common. Small flocks seen/heard daily from clearing at camp and from forest edge throughout.
Tauraco persa† (Linnaeus, 1758)	Guinea Turaco	Common. Small flocks seen/heard daily throughout forest.
Family Cuculidae		
Cuculus clamosus Latham, 1802	Black Cuckoo	Vocal. Heard calling most days from forest throughout.
Chrysococcyx klaas (Stephens, 1815)	Klaas's Cuckoo	Seen/heard twice from forest edge.
Ceuthmochares aereus (Vieillot, 1817)	Yellowbill	Seen once loosely associated with a mixed-species flock at forest edge.
Order APODIFORMES		
Family Apodidae		
Telacanthura ussheri (Sharpe, 1870)	Mottled Spinetail	Uncommon. Groups of 2–4 seen twice foraging over camp with *Apus affinis* and *Cypsiurus parvus*.
Neafrapus cassini (P.L. Sclater, 1863)	Cassin's Spinetail	Uncommon. Small numbers of 1–3 individuals seen most days foraging over primary forest canopy.
*Apus affinis** (J.E. Gray, 1830)	Little Swift	Fairly common. Groups of 2–7 individuals seen foraging over camp every day.
Cypsiurus parvus (Lichtenstein, 1823)	African Palm-Swift	Uncommon. Counts of 1–3 individuals seen on several days foraging over camp and secondary forest.
Order CORACIIFORMES		
Family Alcedinidae		
*Alcedo quadribrachys** Bonaparte, 1850	Shining-blue Kingfisher	One individual netted in primary forest.
*Corythornis leucogaster**§ (Fraser, 1843)	White-bellied Kingfisher	Specimens taken from primary forest, generally along streams. Bursa present in one specimen.
*Ispidina picta** (Boddaert, 1783)	African Pygmy-Kingfisher	Specimens taken from primary forest, but infrequently observed.
Ispidina lecontei Cassin, 1856	Dwarf Kingfisher	One observed in primary forest.
Family Meropidae		
Merops gularis Shaw, 1798	Black Bee-eater	One observed in clearing at camp.
Merops malimbicus Shaw, 1806	Rosy Bee-eater	Two observed flying over secondary forest.

Continued

Table 2. *Continued.*

Taxa	English Name	Notes
Family Bucerotidae		
Tockus albocristatus (Cassin, 1848)	White-crested Hornbill	Uncommon. Several seen foraging at the periphery of mixed-species flocks in forest.
Tockus camurus Cassin, 1857	Red-billed Dwarf Hornbill	Fairly common. Seen most days in groups of 1–6 individuals. Always associated with mixed-species foraging flocks.
Tockus fasciatus (Shaw, 1812)	African Pied Hornbill	Common. Seen daily in forest edge at camp and throughout forest, especially in secondary, mayombe-like forest. Usually seen in large groups of 10–22 individuals, but some small groups (3–7) seen, as well.
Ceratogymna fistulator† (Temminck, 1824)	Piping Hornbill	Fairly common. Small numbers (1–3) seen daily.
Order PICIFORMES		
Family Lybiidae		
Trachyphonus purpuratus J. Verreaux & E. Verreaux, 1851	Yellow-billed Barbet	Fairly common. Heard often, but rarely seen throughout forest.
Gymnobucco calvus§ (Lafresnaye, 1841)	Naked-faced Barbet	Fairly common in forest edge near camp. One breeding colony observed with upwards of 14 individuals. MJA observed one individual *Gymnobucco* that showed characters inconsistent with *G. calvus*. It was associating with the *G. calvus* colony and appeared dark-billed with erect feather tufts at the maxilla (*calvus* is pale-billed and lacks dense feather tufts above the bill), but the face pattern was not well seen, nor was overall plumage color noted. The two dark-billed *Gymnobucco* species (*G. sladeni* Ogilvie-Grant, 1907 and *G. bonapartei*, Hartlaub, 1854) are not known from the study region, but both are known to occur in *G. calvus* breeding colonies (Short and Horne 1988a). Given the uncertainty of this sighting, we remain cautious about interpreting this as anything but an unidentified *Gymnobucco*.
Pogoniulus scolopaceus (Bonaparte, 1850)	Speckled Tinkerbird	Fairly common, seen most days in small numbers (1–3). One individual with red irides collected.
Pogoniulus atroflavus (Sparrman, 1798)	Red-rumped Tinkerbird	One individual seen in forest.
*Pogoniulus subsulphureus**†§ (Fraser, 1843)	Yellow-throated Tinkerbird	Common. The most common tinkerbird. Very vocal throughout forest. Maximum of five seen/heard daily. One specimen with testes enlarged.
Pogoniulus bilineatus (Sundevall, 1850)	Yellow-rumped Tinkerbird	Uncommon. Heard most days, but less common than *Pogoniulus subsulphureus*.
Buccanodon duchaillui† (Cassin, 1855)	Yellow-spotted Barbet	Fairly common. Seen/heard daily in small numbers (1–3) throughout forest.
Tricholaema hirsuta (Swainson, 1821)	Hairy-breasted Barbet	Fairly common. Seen/heard daily in small numbers (1–2) throughout forest.
Family Indicatoridae		
*Indicator maculatus stictithorax** (Reichenow, 1877)	Spotted Honeyguide	One bird collected in primary rainforest. Additionally, one smaller *Indicator* sp. was observed in garden clearings around camp, but it was not identified satisfactorily. It had streaked flanks with a dark malar, but small *Indicator* spp. are difficult to identify in the field based on plumage characters alone, and no vocalizations were noted to aid in identification. At least two species are possible at Luki based on distribution maps (*I. exilis* and *I. conirostris*; Short and Horne 1988b), but further survey work is needed to determine which species occurs at Luki.
Family Picidae		
Sasia africana† J. Verreaux & E. Verreaux, 1855	African Piculet	Uncommon. Upwards of two birds noted in stream-edge vegetation along the transition between primary and mayombe-like forest.
Campethera nivosa (Swainson, 1837)	Buff-spotted Woodpecker	Singles seen three times in forest.
*Campethera caroli**§ (Malherbe, 1852)	Brown-eared Woodpecker	Fairly common. Singles seen in forest most days. One specimen with oviduct enlarged.
Dendropicos gabonensis (J. Verreaux & E. Verreaux, 1851)	Gabon Woodpecker	One bird observed in primary forest.
Dendropicos xantholophus Hargitt, 1883	Golden-crowned Woodpecker	Uncommon. Singles seen three times. Observed foraging in the understory at forest edge, associated with mixed-species flocks.
Dendropicos elliotii (Cassin, 1863)	Elliot's Woodpecker	One bird observed at edge of primary forest, associated with mixed-species flock.
Order PSITTACIFORMES		
Family Psittacidae		
Psittacus erithacus Linnaeus, 1758	Gray Parrot	Fairly common. Upwards of three pairs were observed daily flying over camp heading to a presumed roosting site.
Poicephalus gulielmi (Jardine, 1849)	Red-fronted Parrot	One bird observed in mayombe-like forest.
Order PASSERIFORMES		
Family Eurylaimidae		
*Smithornis rufolateralis**†§ G.R. Gray, 1864	Rufous-sided Broadbill	Fairly common. Several males observed giving display sallies in primary forest.
Family Platysteiridae		
Megabyas flammulatus J. Verreaux & E. Verreaux, 1855	African Shrike-flycatcher	One individual observed in mayombe-like forest.

Continued

Table 2. *Continued.*

Taxa	English Name	Notes
*Platysteira castanea**§ Fraser, 1843	Chestnut Wattle-eye	Common. Seen daily (1–5 individuals) throughout forest. Bursa present in one specimen.
Platysteira tonsa (Bates, 1911)	White-spotted Wattle-eye	One pair seen once foraging with mixed-species flock in understory of primary forest edge by MJA. The birds were easily distinguished and immediately recognizable from *P. castanea* based on the small, but distinct, white post-ocular spot and the female's white malar. They were observed within 0.5 km of camp. *P. tonsa* has a disjunct distribution in the Lower Guinea Forest and northeastern DR Congo with an isolated population in the Congo Basin at Salonga National Park. Erard and Fry (1997) suggest it is probably more widespread, especially in the Congo Basin.
Batis minor Erlanger, 1901	Black-headed Batis	One bird observed in gardens near the camp clearing.
Family Malaconotidae		
Dryoscopus senegalensis (Hartlaub, 1857)	Red-eyed Puffback	Uncommon. Singles observed twice, and one pair observed once in secondary forest and edge.
Dryoscopus sabini (Gray, JE, 1831)	Large-billed Puffback	Uncommon. Small numbers (1–3) seen in secondary forest and edge.
Family Campephagidae		
Campephaga petiti Oustalet, 1884	Petit's Cuckooshrike	Four birds (two males, two females) seen once in a mixed-species canopy flock at primary forest edge near camp clearing.
Campephaga quiscalina Finsch, 1869	Purple-throated Cuckooshrike	Singles seen twice in mixed-species canopy flocks at primary forest edge near camp clearing.
Cyanograucalus azureus (Cassin, 1852)	Blue Cuckooshrike	Two individuals seen in canopy at transition between primary forest and secondary, mayombe-like forest. Loosely associated with mixed-species canopy flock.
Family Oriolidae		
Oriolus brachyrhynchus Swainson, 1837	Western Black-headed Oriole	Common. Seen daily in numbers ranging from 1–8 individuals. Usually associated with mixed-species flocks.
Oriolus nigripennis J. Verreaux & E. Verreaux, 1855	Black-winged Oriole	One individual seen in a mixed-species flock at forest edge near the camp clearing.
Family Dicruridae		
Dicrurus ludwigii (Smith, A, 1834)	Square-tailed Drongo	Fairly common. Often associated with mixed-species flocks in forest.
Dicrurus adsimilis (Bechstein, 1794)	Fork-tailed Drongo	Fairly common. Seen at forest edge, in clearings, and near villages.
Dicrurus modestus Hartlaub, 1849	Velvet-mantled Drongo	The most frequently encountered *Dicrurus*. Seen daily in small numbers ranging from 2–4 individuals.
Family Monarchidae		
Trochocercus nitens† Cassin, 1859	Blue-headed Crested-Flycatcher	One pair observed at primary forest edge.
*Terpsiphone rufiventer**§ (Swainson, 1837)	Black-headed Paradise-Flycatcher	Common in forest throughout. Bursa present in one specimen.
Terpsiphone viridis (Statius Müller, 1776)	African Paradise-Flycatcher	Uncommon. Singles seen infrequently at primary forest edge. Associated with mixed-species flocks.
Family Corvidae		
Corvus albus Statius Müller, 1776	Pied Crow	One individual seen flying over clearing at camp.
Family Nicatoridae		
*Nicator chloris**§ (Valenciennes, 1826)	Yellow-spotted Nicator	Fairly common at forest edge and in streamside vegetation in secondary, mayombe-like forest. Bursa present in two specimens.
Family Hirundinidae		
*Cecropis abyssinica** Guérin-Méneville, 1843	Lesser Striped-Swallow	Common. Flock of about 50 birds seen daily in clearing at camp. Birds roosted in buildings and they likely nest here, as well, but we did not observe evidence of breeding.
Psalidoprocne nitens (Cassin, 1857)	Square-tailed Sawwing	Uncommon. Singles seen three times flying over clearing at camp.
Family Pycnonotidae		
Stelgidillas gracilirostris (Strickland, 1844)	Slender-billed Greenbul	Uncommon. Seen twice (one and two individuals, respectively) in mixed-species foraging flocks in canopy at forest edge.
Calyptocichla serinus (J. Verreaux & E. Verreaux, 1855)	Golden Greenbul	Uncommon. Singles seen three times in mixed-species foraging flocks in canopy at forest edge.
*Bleda syndactylus**§ (Swainson, 1837)	Common Bristlebill	Common throughout primary forest understory. Bursa present in one specimen.
*Bleda notatus**§ (Cassin, 1856)	Lesser Bristlebill	Common throughout primary forest understory. Bursa present in one specimen.
*Chlorocichla falkensteini**§ (Reichenow, 1874)	Yellow-necked Greenbul	Two specimens taken in scrubby vegetation at forest edge near camp, otherwise not recorded on bird surveys. Bursa present in one specimen.
Baeopogon indicator† (J. Verreaux & E. Verreaux, 1855)	Honeyguide Greenbul	Common throughout primary forest subcanopy. Vocal.
Ixonotus guttatus J. Verreaux & E. Verreaux, 1851	Spotted Greenbul	Common in canopy of primary forest and forest edge. Groups of 4–12 seen daily.
Thescelocichla leucopleura† (Cassin, 1855)	Swamp Greenbul	Common in secondary, mayombe-like forest, especially in streamside vegetation including palms. Vocal.

Continued

Table 2. *Continued.*

Taxa	English Name	Notes
*Criniger calurus**§ (Cassin, 1856)	Red-tailed Greenbul	Fairly common throughout primary forest understory. Bursa present in one specimen.
*Criniger ndussumensis** Reichenow, 1904	White-bearded Greenbul	Uncommon in primary forest understory.
*Eurillas gracilis**§ (Cabanis, 1880)	Gray Greenbul	Fairly common. Seen daily in small numbers (1–2). Bursa present in two specimens.
*Eurillas latirostris**†§ (Strickland, 1844)	Yellow-whiskered Greenbul	Common throughout. Vocal. Bursa present in one specimen.
*Eurillas virens**† (Cassin, 1857)	Little Greenbul	Common throughout. Vocal.
*Phyllastrephus icterinus** (Bonaparte, 1850)	Icterine Greenbul	Common in primary forest understory.
*Phyllastrephus xavieri** (Oustalet, 1892)	Xavier's Greenbul	Uncommon in primary forest understory.
*Phyllastrephus albigularis viridiceps** (Rand, 1955)	White-throated Greenbul	Four specimens collected in primary rainforest.
Pycnonotus barbatus (Desfontaines, 1789)	Common Bulbul	Common in clearing at camp. Otherwise, not present in forest.
Family Macrosphenidae		
*Sylvietta virens**§ Cassin, 1859	Green Crombec	Fairly common throughout. Seen/heard daily in small numbers (1–3). Bursa present in one specimen.
*Macrosphenus flavicans**§ Cassin, 1859	Yellow Longbill	Uncommon in scrubby vegetation at forest edge and clearings. Bursa present in one specimen.
*Macrosphenus concolor** (Hartlaub, 1857)	Gray Longbill	Uncommon in scrubby vegetation at forest edge and clearings.
Family Cettiidae		
Erythrocercus mccallii (Cassin, 1855)	Chestnut-capped Flycatcher	Fairly common. Seen often in garden in clearing near camp and in secondary, mayombe-like forest, often with mixed-species flocks.
Family Cisticolidae		
Apalis rufogularis (Fraser, 1843)	Buff-throated Apalis	Uncommon. Seen twice (a singleton and pair, respectively) associating with mixed-species flocks in the canopy of primary forest.
*Camaroptera brachyura**§ (Vieillot, 1821)	Green-backed Camaroptera	Uncommon in scrubby vegetation in forest clearing near camp. Bursa present in one specimen.
Camaroptera chloronota† Reichenow, 1895	Olive-green Camaroptera	Uncommon in scrubby understory vegetation of secondary, mayombe-like forest.
*Cisticola anonymus** (J.W. von Müller, 1855)	Chattering Cisticola	Fairly common in forest clearing near camp and at forest edge throughout.
*Prinia bairdii**§ (Cassin, 1855)	Banded Prinia	Two taken from scrubby vegetation in a garden in the clearing near camp. One juvenile bird suggests breeding occurred here shortly before the survey period.
Eremomela badiceps§ (Fraser, 1843)	Rufous-crowned Eremomela	Fairly common. Seen most days in family groups (n=4 individuals) foraging in canopy associated with mixed-species flocks. Adults of this species are sexually monomorphic and distinct from juveniles, which are overall lemon-yellow below and gray above.
Family Sylviidae		
*Hylia prasina**† (Cassin, 1855)	Green Hylia	Fairly common. Small numbers (1–4) seen/heard daily in understory of primary forest.
Family Zosteropidae		
Zosterops sp.		One individual white-eye seen twice in a fruiting vine tangle at forest edge near camp. Photographed by MJA. The photos depict a bright yellow bird that lacks the dusky green flanks and back of *Z. senegalensis* and the distinct yellow lores, of *Z. stenocricotus*.
Family Pellorneidae		
*Illadopsis fulvescens** (Cassin, 1859)	Brown Illadopsis	Fairly common. Seen in small groups (2+) in understory of primary forest.
*Illadopsis rufipennis** (Sharpe, 1872)	Pale-breasted Illadopsis	Uncommon in forest understory.
Family Hyliotidae		
Hyliota violacea J. Verreaux & E. Verreaux, 1851	Violet-backed Hyliota	Uncommon. Singles (females only) seen in mixed-species flocks at forest edge and in garden near camp.
Family Muscicapidae		
Muscicapa infuscata (Cassin, 1855)	Sooty Flycatcher	A group of three birds was seen on two days in the canopy at forest edge near camp.
Muscicapa olivascens (Cassin, 1859)	Olivaceous Flycatcher	Seen once in canopy of primary forest.
Muscicapa epulata (Cassin, 1855)	Little Flycatcher	Fairly common. Seen in small numbers (1–3) in gardens and forest edge, loosely associated with mixed-species flocks.
Muscicapa cassini Heine, 1860	Cassin's Flycatcher	Seen twice in streamside vegetation in secondary forest.
Myioparus plumbeus (Hartlaub, 1858)	Gray Tit-Flycatcher	Seen once in in secondary forest, loosely associated with mixed-species flocks.
Family Turdidae		
*Alethe diademata** (Bonaparte, 1850)	Fire-crested Alethe	One taken in understory of primary forest.
*Cossypha natalensis**§ A. Smith, 1840	Red-capped Robin-Chat	One taken in scrubby vegetation at forest edge near camp. Bursa present in one specimen.

Continued

Table 2. *Continued.*

Taxa	English Name	Notes
*Neocossyphus fraseri**§ (Strickland, 1844)	Rufous Flycatcher-Thrush	Uncommon. Pairs seen in understory of primary forest edge, loosely associated with mixed-species flocks. Bursa present in one specimen.
Family Sturnidae		
Onychognathus fulgidus Hartlaub, 1849	Chestnut-winged Starling	One pair of birds was observed loosely associating with mixed-species flock in the canopy of secondary, mayombe-like forest.
Poeoptera lugubris Bonaparte, 1854	Narrow-tailed Starling	Fairly common. One singleton was observed in the canopy at forest edge, on the periphery of a mixed-species flock, but not thought to be part of the flock. A group of upwards of 14 were observed twice at a *Gymnobucco calvus* breeding colony.
Family Nectariniidae		
*Deleornis fraseri**§ (Jardine & Selby, 1843)	Fraser's Sunbird	Common. Seen frequently foraging in the midstory of primary forest, always associated with mixed-species flocks. Always observed probing dead-leaf clusters. Bursa present in two specimens.
Anthreptes seimundi (Ogilvie-Grant, 1908)	Little Green Sunbird	Fairly common. Seen in small numbers (1–6), often foraging in shrubby vegetation at forest edge.
*Anthreptes rectirostris** (Shaw, 1812)	Green Sunbird	Uncommon. Seen in small numbers (1–2) in clear near camp.
*Hedydipna collaris** (Vieillot, 1819)	Collared Sunbird	Common. Seen daily throughout.
*Cyanomitra obscura** (Jardine, 1842)	Western Olive Sunbird	Common. Seen daily throughout.
Cinnyris chloropygius (Jardine, 1842)	Olive-bellied Sunbird	Common. Seen daily at forest edge, near villages, and in clearing at camp.
*Cinnyris superbus** (Shaw, 1812)	Superb Sunbird	Uncommon. Seen at forest edge near camp and near villages.
Family Passeridae		
Passer griseus (Vieillot, 1817)	Northern Gray-headed Sparrow	Common. Seen daily in clearing at camp.
Family Ploceidae		
Malimbus cassini (Elliot, 1859)	Black-throated Malimbe	Pairs seen twice foraging in mixed-species canopy flocks.
Malimbus erythrogaster Reichenow, 1893	Red-bellied Malimbe	Seen twice by MJA, a male-female pair and a single female, foraging in mixed-species canopy flocks at the edge of primary forest within 0.25 km of camp. Both male and female birds were diagnostic based on the male's full red belly, including undertail coverts, and the female's orange-red hood bordering a black face. Only *M. nitens* and *M. malimbicus* have red throats, but *M. nitens* has a full black head and crown and *M. malimbicus* lacks the black face of female *M. erythrogaster*. *Malimbus erythrogaster* is local and patchily distributed in the Lower Guinea Forest and more widespread in the Upper Congo Basin east to the Albertine Rift (Fry 2004). This record represents a southern extension of its distribution in the Lower Guinea Forest.
*Malimbus malimbicus** (Daudin, 1802)	Crested Malimbe	Single birds seen twice in primary forest.
Malimbus rubricollis (Swainson, 1838)	Red-headed Malimbe	Uncommon, pairs seen in mixed-species canopy flocks in secondary forest and edge of primary forest.
Ploceus cucullatus (S. Müller, 1776)	Village Weaver	Common. Flock of 30 seen in a large mixed-species flock at edge of secondary forest near a village, smaller numbers (n=4–6) seen in clearing at camp. All birds in non-breeding plumage and in heavy state of molt, suggesting June is not a breeding season for this species at Luki.
Ploceus tricolor (Hartlaub, 1854)	Yellow-mantled Weaver	Uncommon, singles and pairs seen in mixed-species canopy flocks.
Family Estrildidae		
Nigrita luteifrons J. Verreaux & E. Verreaux, 1851	Pale-fronted Nigrita	Fairly common. Small numbers (1–2) seen in forest and near camp, often associating with mixed-species canopy flocks. One male observed collecting nesting material in garden in the clearing near camp.
*Nigrita canicapillus** (Strickland, 1841)	Gray-headed Nigrita	Fairly common. Small numbers (1–2) seen in forest and near camp.
Nigrita bicolor (Hartlaub, 1844)	Chestnut-breasted Nigrita	One individual observed in a mixed-species canopy flock at the edge of primary forest near camp.
Nigrita fusconotus Fraser, 1843	White-breasted Nigrita	Uncommon. Small numbers (1–3) seen in canopy at forest edge, sometimes associating with mixed-species flocks.
*Parmoptila woodhousei** Cassin, 1859	Woodhouse's Antpecker	Uncommon. Singles seen in understory of primary forest.
*Mandingoa nitidula**§ (Hartlaub, 1865)	Green-backed Twinspot	Uncommon. Singles seen at forest edge and in clearings near camp. Bursa present in one specimen.
*Spermophaga haematina** (Vieillot, 1807)	Western Bluebill	Uncommon. Pairs seen in understory of primary forest, sometimes associating with mixed-species understory flocks.
*Pyrenestes ostrinus** (Vieillot, 1805)	Black-bellied Seedcracker	One taken from clearing near camp.
Spermestes cucullatus (Swainson, 1837)	Bronze Mannikin	Three birds seen once at forest edge near a village.
Spermestes bicolor (Fraser, 1843)	Black-and-white Mannikin	Fairly common. Small numbers (2–4) seen daily in clearing near camp.

Figure 2. Mature second growth forest (**A**) and gallery forest (**B**) at the Man and Biosphere Reserve of Luki.

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Figure 3. Photos of birds of the Man and Biosphere Reserve of Luki. (**A**) Chestnut-flanked Sparrowhawk *Accipiter castanilius* [juvenile], (**B**) Blue-spotted Wood-Dove *Turtur afer*, (**C**) Little Swift *Apus affinis*, (**D**) Shining-blue Kingfisher *Alcedo quadribrachys*, (**E**) White-bellied Kingfisher *Corythornis leucogaster*, (**F**) African Pygmy-Kingfisher *Ispidina picta*, (**G**) Yellow-throated Tinkerbird *Pogoniulus subsulphureus*, (**H**) Brown-eared Woodpecker *Campethera caroli*.

Figure 4. Photos of birds of the Man and Biosphere Reserve of Luki. (**A**) Rufous-sided Broadbill *Smithornis rufolateralis* [male], (**B**) Rufous-sided Broadbill *Smithornis rufolateralis* [female], (**C**) Chestnut Wattle-eye *Platysteira castanea* [male], (**D**) Square-tailed Drongo *Dicrurus ludwigii*, (**E**) Chestnut Wattle-eye *Platysteira castanea* [female], (**F**) Black-headed Paradise-Flycatcher *Terpsiphone rufiventer*.

Figure 5. Photos of birds of the Man and Biosphere Reserve of Luki. (**A**) Yellow-spotted Nicator *Nicator chloris*, (**B**) Lesser Striped-Swallow *Cecropis abyssinica*, (**C**) Common Bristlebill *Bleda syndactylus*, (**D**) Lesser Bristlebill *Bleda notatus*, (**E**) Yellow-necked Greenbul *Chlorocichla falkensteini*, (**F**) Red-tailed Greenbul *Criniger calurus*, (**G**) Gray Greenbul *Eurillas gracilis*, (**H**) Yellow-whiskered Greenbul *Eurillas latirostris*.

Figure 6. Photos of birds of the Man and Biosphere Reserve of Luki. (**A**) Little Greenbul *Eurillas virens*, (**B**) Green Crombec *Sylvietta virens*, (**C**) Yellow Longbill *Macrosphenus flavicans*, (**D**) Gray Longbill *Macrosphenus concolor*, (**E**) Green-backed Camaroptera *Camaroptera brachyura*, (**F**) Chattering Cisticola *Cisticola anonymus*, (G) Banded Prinia *Prinia bairdii*, (**H**) Green Hylia *Hylia prasina*.

Figure 7. Photos of birds of the Man and Biosphere Reserve of Luki. (**A**) *Zosterops* sp., (**B**) Brown Illadopsis *Illadopsis fulvescens*, (**C**) Fire-crested Alethe *Alethe diademata*, (**D**) Red-capped Robin-Chat *Cossypha natalensis*, (**E**) Fraser's Sunbird *Deleornis fraseri*, (**F**) Green Sunbird *Anthreptes rectirostris*, (**G**) Collared Sunbird *Hedydipna collaris* [female], (**H**) Superb Sunbird *Cinnyris superbus*.

Figure 8. Photos of birds of the Man and Biosphere Reserve of Luki. (**A**) Crested Malimbe *Malimbus malimbicus*, (**B**) Gray-headed Nigrita *Nigrita canicapillus*, (**C**) White-breasted Nigrita *Nigrita fusconotus*, (**D**) Woodhouse's Antpecker *Parmoptila woodhousei*, (**E**) Green-backed Twinspot *Mandingoa nitidula*, (**F**) Western Bluebill *Spermophaga haematina* (**G**) Black-bellied Seedcracker *Pyrenestes ostrinus*.